

Serial No. 10/808,350

REMARKS

In the Office Action the Examiner noted that claims 1-3 are pending in the application, and the Examiner rejected all claims. By this Amendment, new claim 4 has been added. No new matter has been presented. Thus, claims 1-4 are pending in the application. The Examiner's rejections are traversed below, and reconsideration of all rejected claims is respectfully requested.

Acknowledgement of Claim For Foreign Priority

In the Office Action Summary the Examiner did not acknowledge the Applicant's claim for foreign priority made on March 25, 2004, submitted along with a certified copy of Japanese Patent Application No. 2003-356180, that application having a filing date of October 16, 2003. The Applicant respectfully requests that the Examiner acknowledge the claim for foreign priority.

Claim Rejections Under 35 USC §103

In item 2 on pages 2-3 of the Office Action the Examiner rejected claim 1 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,260,006, issued to Wong et al. (hereinafter referred to as "Wong") in view of U.S. Patent No. 6,775,087, issued to Chan et al. (hereinafter referred to as "Chan"). The Applicant respectfully traverses the Examiner's rejection of this claim.

The Examiner acknowledged that Wong fails to disclose a tape cartridge which "includes a cartridge memory which stores information in a nonvolatile and rewritable manner," as is recited in claim 1 of the present application. However, the Examiner stated that Wong does disclose other elements of claim 1, such "an access-controlling section which allows the cartridge memory to store management information of a plurality of volumes using the memory read/writer." The Applicant respectfully submits that Wong cannot disclose nor suggest this feature of claim 1 without disclosing the cartridge memory as recited in claim 1. Also, the Examiner does not identify the "memory read/writer for accessing the cartridge memory," as is recited in claim 1, but merely identifies a memory read/writer. This is not the feature recited in claim 1. Further, the section of Wong identified by the Examiner as disclosing the "access-controlling section" of claim 1 does not mention or suggest "the access-controlling section which allows the cartridge memory to store management information of volumes using the memory read/writer," as is recited in claim 1.

Serial No. 10/808,350

Therefore, neither Wong nor Chan, either alone or in combination, discloses at least these features recited in claim 1. For a proper §103 rejection, the cited references must combine to disclose all of the features of the rejected claim. As the cited references do not disclose all of the recited claim 1 features, the Applicant respectfully submits that claim 1 patentably distinguishes over the cited references.

Further, even if Wong and Chan did disclose all of the features of claim 1, and the Applicant respectfully submits that they do not, there would be no motivation to combine the two references. MPEP § 2142 states that "[w]hen the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper." Here, the Examiner has simply stated, with no evidence to support the assertion, that "[i]t would have been obvious to....use the non-volatile cartridge memory as taught by Chan in the tape cartridge of Wong, to increase the speed of data access by enabling a tape drive to quickly locate and access a data file." The Applicant respectfully submits that this is not a reasonable conclusion. The "cartridge memory included in the cartridge" of claim 1 is a memory that stores management information of regarding a plurality of volumes. On the contrary, management information of volumes disclosed in Wong is stored in a TLCU 62, not stored in the cartridge side (see Figure 4 and the related description in Wong). Therefore, there is no need for Wong to additionally provide the cartridge 28 with a memory for storing management information of volumes. Thus, there would be no motivation for one skilled in the art to combine the references. The Examiner is required to present actual evidence and make particular findings related to the motivation to combine the teachings of the references. In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); In re Dembiczak, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." Dembiczak, 50 USPQ2d at 1617. "The factual inquiry whether to combine the references must be thorough and searching." In re Lee, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) (citing McGinley v. Franklin Sports, Inc., 60 USPQ2d 1001, 1008 (Fed. Cir. 2001)). The factual inquiry must be based on objective evidence of record, and cannot be based on subjective belief and unknown authority. Id. at 1433-34. The Examiner must explain the reasons that one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. In re Rouffet, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998).

Further, in addition to there being no motivation to combine Wong and Chan, the Applicant respectfully submits that Wong actually teaches away from a combination with Chan. The goal of Wong is to supply a tape library system that removes tape management functions

Serial No. 10/808,350

from a host computer to reduce the computational overhead burden on the host computer. Therefore, Wong discloses giving this control to the TLCU 62. Having the volume control further complicated by cartridge memories would only increase overhead of the overall system, and processing time for the interaction between the TLCU 62 and the multiple tape cartridges. Also, one of the features of this TLCU 62 is the ability to perform defragmenting in the tape cartridges. The TLCU 62 retains a list of volumes contained on each tape cartridge and determines when a tape cartridge needs defragmenting. The TLCU 62 can find a second tape cartridge that has enough free space to hold the data from a first tape cartridge, and perform defragmenting in that manner (Column 6, Lines 1-21). Without this central control by the TLCU 62, these features of Wong would not be possible. In other words, Wong teaches away from a the cartridge memory used to manage information of the individual tape cartridges.

In items 3-4 on pages 3-5 of the Office Action the Examiner rejected claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,940,849, issued to Kayoma (hereinafter referred to as "Kayoma") in view of Chan. The Applicant respectfully traverses the Examiner's rejections of these claims.

Similar to the arguments provided above in regard to Wong, the Examiner has not identified at least the features of "a memory read/writer for accessing the cartridge memory" and "an access-controlling section which allows the cartridge memory to store management information of a plurality of volumes using the memory read/writer", recited in claim 1 of the present application, in the disclosure of Kayoma. This is due at least to the fact that no cartridge memory is disclosed or suggested in Kayoma, and therefore the related features could not be disclosed or suggested.

Also similar to the arguments provided in regard to Wong, the Applicant respectfully submits that there is no motivation to combine Kayoma and Chan. The "cartridge memory included in the cartridge" recited in claim 1 is a memory that stores management information of a plurality of volumes. On the contrary, management information of volumes disclosed in Koyama is stored in a MTU table 26, not stored in the cartridge side (see Fig. 4 and the related description in Koyama). Therefore, there is no need for Koyama to additionally provide the cartridge 13 with a memory for storing management information of volume, which would be redundant. Thus, the combination would not "increase the speed of data access by enabling a tape drive to quickly locate and access a data file," as was stated by the Examiner, but would actually add more computation time and actually decrease the speed of the data access. The

Serial No. 10/808,350

disclosure of Kayoma thus teaches away from the combination with Chan. The Applicants therefore respectfully submit that claim 1 patentably distinguishes over the cited references.

Claims 2-3 depend from claim 1 and include all of the features of that claim plus additional features which are not disclosed or suggested by the cited references. Therefore, it is respectfully submitted that claims 2-3 also patentably distinguish over the cited references.

In Item 6 on page 5 of the Office Action the Examiner rejected claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,327,535, issued to Ogata et al. (hereinafter referred to as "Ogata") in view of Chan. The Applicant respectfully traverses the Examiner's rejections of these claims.

Similar to the arguments provided in regard to Wong and Kayoma, Ogata fails to disclose that the tape cartridge "includes a cartridge memory that stores volume information in a nonvolatile and rewritable manner." Because such a cartridge memory is not disclosed, Ogata also fails to disclose "a memory read/writer for accessing the cartridge memory" and "an access-controlling section which allows the cartridge memory to store management information of a plurality of volumes using the memory read/writer." The Examiner did not identify which element of Ogata corresponds to the memory read/writer of claim 1, but merely stated that Ogata discloses "a memory read/writer." In addition, the part of Ogata cited as disclosing the "access-controlling section" of claim 1 never discloses or suggests the feature of the access-controlling section of claim 1, particularly "the access-controlling section which allows the cartridge memory to store management information of volumes using the memory read/writer," as recited in claim 1.

Also, there would be no motivation for one skilled in the art to combine Ogata with Chan. The cartridge which "includes a cartridge memory," recited in claim 1, is a memory that stores management information of a plurality of volumes. On the contrary, management information of volumes disclosed in Ogata is stored in a microprocessor 14 of a magnetic tape controller 12, not stored in the cartridge side (see Figure 2 and the related description in Ogata). Therefore, there would be no need for Ogata to additionally provide the cartridge 13 with a memory for storing management information of a plurality of volumes. Accordingly, a person skilled in the art would not be motivated to modify Ogata to incorporate the memory of Chan. "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art" (MPEP 2143.01). "The mere fact that references can be combined or

Serial No. 10/808,350

modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Thus, the Applicant respectfully submits that claim 1 patentably distinguishes over Ogata and Chan. Further, as claims 2-3 depend from claim 1 and include all of the features of that claim plus additional features which are not disclosed or suggested by the cited references, the Applicant respectfully submits that claims 2-3 also patentably distinguish over the cited references.

New Claim 4

New claim 4 is directed to a magnetic tape unit including "an access-controller to receive the request to access one of a plurality of cartridges, and to accordingly control access, through the memory read/writer, to one of a plurality of volumes on the single cartridge which represent virtual cartridges."

Thus, the Applicant respectfully submits that new claim 4 patentably distinguishes over the cited references.

Summary

In accordance with the foregoing, new claim 4 has been added. No new matter has been presented. Thus, claims 1-4 are pending in the application.

There being no further outstanding objections or rejections, it is respectfully submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Serial No. 10/808,350

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 06/13/06

By: Thomas L. Jones
Thomas L. Jones
Registration No. 53,908

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

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P.O. Box 1450, Alexandria, VA 22313-1450
on 06/13/06, 2006
STAAS & HALSEY
By: Thomas L. Jones
Date 06/13/06